

Sanjay S Nimbalkar

List of Publications by Year in descending order

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130
papers

3,503
citations

136950

32
h-index

155660

55
g-index

135
all docs

135
docs citations

135
times ranked

1330
citing authors

#	ARTICLE	IF	CITATIONS
1	Time-dependent evolution of bearing capacity of driven piles in clays. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 2023, 176, 402-418.	1.6	3
2	Pile group in clay under cyclic lateral loading with emphasis on bending moment: Numerical modelling. Marine Georesources and Geotechnology, 2023, 41, 269-284.	2.1	17
3	Mathematical Modeling of the Short-Term Performance of Railway Track Under Train-Induced Loading. Lecture Notes in Civil Engineering, 2022, , 15-24.	0.4	0
4	Railway Subgrade Characterization Through Repeated Loading Triaxial Testing. Lecture Notes in Civil Engineering, 2022, , 327-335.	0.4	0
5	Field Installation Effects of Stone Columns on Load Settlement Characteristics of Reinforced Soft Ground. International Journal of Geomechanics, 2022, 22, .	2.7	9
6	Mechanism Analysis of Rock Failure Process under High-Voltage Electropulse: Analytical Solution and Simulation. Materials, 2022, 15, 2188.	2.9	8
7	Dynamic Behavior of the Transition Zone of an Integral Abutment Bridge. Sustainability, 2022, 14, 4118.	3.2	7
8	A Semi-Analytical Solution for Shock Wave Pressure and Radius of Soil Plastic Zone Induced by Lightning Strikes. Materials, 2022, 15, 2239.	2.9	3
9	Novel Open Trench Techniques in Mitigating Ground-Borne Vibrations due to Traffic under a Wide Range of Ground Conditions. International Journal of Geomechanics, 2022, 22, .	2.7	3
10	Re-liquefaction resistance of lightly cemented sands. Canadian Geotechnical Journal, 2022, 59, 2085-2101.	2.8	3
11	Analytical modelling of the mechanical damage of soil induced by lightning strikes capturing electro-thermal, thermo-osmotic, and electro-osmotic effects. Journal of Mountain Science, 2022, 19, 2027-2043.	2.0	3
12	NMR-Based Measurement of AWRC and Prediction of Shear Strength of Unsaturated Soils. International Journal of Geomechanics, 2022, 22, .	2.7	0
13	Shear behavior of polyurethane foam adhesive improved calcareous sand under large-scale triaxial test. Marine Georesources and Geotechnology, 2021, 39, 1449-1458.	2.1	11
14	Strength and Deformation Characteristics of Calcareous Sands Improved by PFA. KSCE Journal of Civil Engineering, 2021, 25, 60-69.	1.9	9
15	Prediction of Extra Confinement Offered by Cellular Inclusion Under Three-Dimensional Stress State. Lecture Notes in Civil Engineering, 2021, , 850-858.	0.4	0
16	Laboratory Investigation on Particle Breakage Characteristics of Calcareous Sands. Advances in Civil Engineering, 2021, 2021, 1-8.	0.7	2
17	Laboratory and Constitutive Modeling of Critical State Behavior of Rockfill Aggregates Mixed with Polymer. Journal of Testing and Evaluation, 2021, 49, 4344-4356.	0.7	1
18	Phenomenological fractional stress-dilatancy model for granular soil and soil-structure interface under monotonic and cyclic loads. Acta Geotechnica, 2021, 16, 3115-3132.	5.7	19

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19	Finite Element Modeling of the Dynamic Response of Critical Zones in a Ballasted Railway Track. <i>Frontiers in Built Environment</i> , 2021, 7, .	2.3	11
20	Simplified geotechnical rheological model for simulating viscoelastoâ€plastic response of ballasted railway substructure. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2021, 45, 2019-2047.	3.3	10
21	Three-dimensional finite element analyses of tyre derived aggregates in ballasted and ballastless tracks. <i>Computers and Geotechnics</i> , 2021, 136, 104220.	4.7	16
22	Three-dimensional assessment of cracked slopes with pore water pressure using limit analysis. <i>Environmental Earth Sciences</i> , 2021, 80, 1.	2.7	4
23	Improved Vacuum Preloading Method Combined with Sand Sandwich Structure for Consolidation of Dredged Clay-Slurry Fill and Original Marine Soft Clay. <i>International Journal of Geomechanics</i> , 2021, 21, .	2.7	8
24	Cyclic stress-strain characteristics of calcareous sand improved by polyurethane foam adhesive. <i>Transportation Geotechnics</i> , 2021, 31, 100640.	4.5	16
25	Performance Improvement of Ballasted Railway Tracks for High-Speed Rail Operations. <i>Lecture Notes in Civil Engineering</i> , 2021, , 841-849.	0.4	4
26	Finite Element Analysis of Soil Arching in Piled Embankment. <i>Lecture Notes in Civil Engineering</i> , 2021, , 817-824.	0.4	1
27	Simple Graphical Prediction of Relative Permeability of Unsaturated Soils under Deformations. <i>Fractal and Fractional</i> , 2021, 5, 153.	3.3	4
28	Analytical and Numerical Solutions to Selected Research Problems in Geomechanics and Geohydraulics. <i>WSEAS Transactions on Applied and Theoretical Mechanics</i> , 2021, 16, 222-231.	1.1	5
29	Liquefaction and post-liquefaction assessment of lightly cemented sands. <i>Canadian Geotechnical Journal</i> , 2020, 57, 173-188.	2.8	17
30	Evaluation of additional confinement for three-dimensional geoinclusions under general stress state. <i>Canadian Geotechnical Journal</i> , 2020, 57, 453-461.	2.8	17
31	Field assessment of railway ballast degradation and mitigation using geotextile. <i>Geotextiles and Geomembranes</i> , 2020, 48, 275-283.	4.6	29
32	Strength Enhancement of Geotextile-Reinforced Fly-Ash-Based Geopolymer Stabilized Residual Soil. <i>International Journal of Geosynthetics and Ground Engineering</i> , 2020, 6, 1.	2.0	10
33	Effects of Tunneling-Induced Ground Movements on Stability of Piled Raft Foundation: Three-Dimensional Finite-Element Approach. <i>International Journal of Geomechanics</i> , 2020, 20, .	2.7	8
34	A Strain Dependent Approach for Seismic Stability Assessment of Rigid Retaining Wall. <i>Geotechnical and Geological Engineering</i> , 2020, 38, 6041-6055.	1.7	1
35	Editorial: Geotechnical Innovation for Transport Infrastructures. <i>Frontiers in Built Environment</i> , 2020, 6, .	2.3	0
36	Effects of soil arching on behavior of pile-supported railway embankment: 2D FEM approach. <i>Computers and Geotechnics</i> , 2020, 123, 103601.	4.7	31

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37	Applicability of Bouc-Wen Model to Capture Asymmetric Behavior of Sand at High Cyclic Shear Strain. International Journal of Geomechanics, 2020, 20, .	2.7	8
38	Field Assessment of Gravel Loss on Unsealed Roads in Australia. Frontiers in Built Environment, 2020, 6, .	2.3	0
39	Analytical Evaluation of Ballasted Track Substructure Response under Repeated Train Loads. International Journal of Geomechanics, 2020, 20, .	2.7	15
40	Finite Element Modeling of Soil Arching in Pile Supported Embankment: 2D Approach. Sustainable Civil Infrastructures, 2020, , 40-50.	0.2	1
41	Performance Improvement of Ballasted Railway Tracks Using Geocells: Present State of the Art. Springer Transactions in Civil and Environmental Engineering, 2020, , 277-318.	0.4	5
42	Visual Inspection Based Maintenance Strategy on Unsealed Road Network in Australia. Sustainable Civil Infrastructures, 2020, , 92-103.	0.2	2
43	Three-Dimensional Slope Stability Analysis Incorporating Coupled Effects of Pile Reinforcement and Reservoir Drawdown. International Journal of Geomechanics, 2019, 19, .	2.7	13
44	Piles Subjected to Torsional Cyclic Load: Numerical Analysis. Frontiers in Built Environment, 2019, 5, .	2.3	6
45	Finite Element Modeling of Ballasted Rail Track Capturing Effects of Geosynthetic Inclusions. Frontiers in Built Environment, 2019, 5, .	2.3	16
46	Effect of Particle Shape and Confining Pressure on Breakage and Deformation of Artificial Rockfill. International Journal of Geosynthetics and Ground Engineering, 2019, 5, 1.	2.0	10
47	Stability Assessment of Earth Retaining Structures under Static and Seismic Conditions. Infrastructures, 2019, 4, 15.	2.8	7
48	Three-dimensional limit analysis of slopes reinforced with piles in soils exhibiting heterogeneity and anisotropy in cohesion. Soil Dynamics and Earthquake Engineering, 2019, 121, 194-199.	3.8	22
49	Particle breakage of granular materials during sample preparation. Journal of Rock Mechanics and Geotechnical Engineering, 2019, 11, 417-422.	8.1	23
50	Effect of Water Drawdown and Dynamic Loads on Piled Raft: Two-Dimensional Finite Element Approach. Infrastructures, 2019, 4, 75.	2.8	8
51	Contact Pressure Distribution on Subgrade Soil Underlying Geocell Reinforced Foundation Beds. Frontiers in Built Environment, 2019, 5, .	2.3	3
52	Stress-fractional soil model with reduced elastic region. Soils and Foundations, 2019, 59, 2007-2023.	3.1	7
53	Influence of Particle Size Distribution on the Critical State of Rockfill. Advances in Civil Engineering, 2019, 2019, 1-7.	0.7	9
54	A New Failure Load Criterion for Large-Diameter Under-Reamed Piles: Practical Perspective. International Journal of Geosynthetics and Ground Engineering, 2018, 4, 1.	2.0	1

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55	Measured and Predicted Response of Pile Groups in Soft Clay Subjected to Cyclic Lateral Loading. International Journal of Geomechanics, 2018, 18, .	2.7	50
56	Effect of water and salinity on soil behaviour under lightning. Environmental Geotechnics, 2018, 5, 56-62.	2.3	4
57	Grading and frequency dependence of the resilient modulus of ballast. Geotechnique Letters, 2018, 8, 305-309.	1.2	17
58	Seismic Active Thrust on Rigid Retaining Wall Using Strain Dependent Dynamic Properties. International Journal of Geomechanics, 2018, 18, .	2.7	16
59	Effect of fiber reinforcement on shear strength and void ratio of soft clay. Geosynthetics International, 2018, 25, 471-480.	2.9	46
60	Finite element model of ballasted railway with infinite boundaries considering effects of moving train loads and Rayleigh waves. Soil Dynamics and Earthquake Engineering, 2018, 114, 147-153.	3.8	56
61	Closure to "Estimation of Passive Earth Pressure against Rigid Retaining Wall Considering Arching Effect in Cohesive-Frictional Backfill under Translation Mode" by Yanyan Cai, Qingsheng Chen, Yitao Zhou, Sanjay Nimbalkar, and Jin Yu. International Journal of Geomechanics, 2018, 18, 07018012.	2.7	1
62	A simplified approach to assess seismic stability of tailings dams. Journal of Rock Mechanics and Geotechnical Engineering, 2018, 10, 1082-1090.	8.1	18
63	Two Decades of Advancement in Process Simulation Testing of Ballast Strength, Deformation, and Degradation. , 2018, , 11-38.		6
64	A new mixing technique for solidifier and dredged fill in coastal area. Marine Georesources and Geotechnology, 2017, 35, 52-61.	2.1	8
65	Numerical Solution of Single Pile Subjected to Torsional Cyclic Load. International Journal of Geomechanics, 2017, 17, .	2.7	41
66	Seismic response of concrete-rockfill combination dam using large-scale shaking table tests. Soil Dynamics and Earthquake Engineering, 2017, 99, 9-19.	3.8	10
67	Elastoplastic Solution for Spherical Cavity Expansion in Modified Cam-Clay Soil under Drained Condition. International Journal of Geomechanics, 2017, 17, .	2.7	6
68	Identification of ballast grading for rail track. Journal of Rock Mechanics and Geotechnical Engineering, 2017, 9, 945-954.	8.1	18
69	Evaluation of seismic passive earth pressure of inclined rigid retaining wall considering soil arching effect. Soil Dynamics and Earthquake Engineering, 2017, 100, 286-295.	3.8	36
70	Estimation of Passive Earth Pressure against Rigid Retaining Wall Considering Arching Effect in Cohesive-Frictional Backfill under Translation Mode. International Journal of Geomechanics, 2017, 17, .	2.7	43
71	Application of fractional calculus in modelling ballast deformation under cyclic loading. Computers and Geotechnics, 2017, 82, 16-30.	4.7	32
72	Laboratory study on impulse current characteristics of clay. Environmental Geotechnics, 2017, 4, 199-208.	2.3	9

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73	Field Data Based Method for Predicting Long-Term Settlements. American Journal of Engineering and Applied Sciences, 2016, 9, 466-476.	0.6	3
74	Improved Performance of Ballasted Rail Track Using Geosynthetics and Rubber Shockmat. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2016, 142, .	3.0	97
75	The Deformation and Degradation of Granular Material under High-Frequency Cyclic Loading. , 2016, , .		0
76	Performance improvement of rail track substructure using artificial inclusions “ Experimental and numerical studies. Transportation Geotechnics, 2016, 8, 69-85.	4.5	55
77	An Elasto-plastic Method for Analysing the Deformation of the Railway Ballast. Procedia Engineering, 2016, 143, 954-960.	1.2	7
78	Assessment of Interface Shear Behaviour of Sub-ballast with Geosynthetics by Large-scale Direct Shear Test. Procedia Engineering, 2016, 143, 1007-1015.	1.2	13
79	Deformation and Degradation of Railroad Granular Layers under High Frequency Cyclic Loading and the Benefits of Using Geosynthetics. , 2016, , .		2
80	Modeling Behaviour of Railway Ballast in Prismoidal Apparatus Using Discrete Element Method. Procedia Engineering, 2016, 143, 1177-1184.	1.2	14
81	Application of Shock Mats in Rail Track Foundation Subjected to Dynamic Loads. Procedia Engineering, 2016, 143, 1108-1119.	1.2	13
82	Field Assessment of Ballasted Railroads Using Geosynthetics and Shock Mats. Procedia Engineering, 2016, 143, 1485-1494.	1.2	13
83	Determination of Active Earth Pressure on Rigid Retaining Wall Considering Arching Effect in Cohesive Backfill Soil. International Journal of Geomechanics, 2016, 16, .	2.7	59
84	Laboratory Assessment of the Role of Particle Size Distribution on the Deformation and Degradation of Ballast under Cyclic Loading. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2016, 142, .	3.0	65
85	Isotropic“kinematic hardening model for coarse granular soils capturing particle breakage and cyclic loading under triaxial stress space. Canadian Geotechnical Journal, 2016, 53, 646-658.	2.8	45
86	Deformation and Degradation Mechanisms of Railway Ballast under High Frequency Cyclic Loading. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2016, 142, .	3.0	110
87	An Australian Perspective on Modernization of Rail Tracks Using Geosynthetics and Shockmats. , 2015, , 583-608.		1
88	Closure to “Behavior of Geocell-Reinforced Subballast Subjected to Cyclic Loading in Plane-Strain Condition” by Buddhima Indraratna, M. Mahdi Biabani, and Sanjay Nimbalkar. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2015, 141, 07015028.	3.0	0
89	Application of bounding surface plasticity concept for clay-fouled ballast under drained loading. Computers and Geotechnics, 2015, 70, 96-105.	4.7	19
90	Behavior of Geocell-Reinforced Subballast Subjected to Cyclic Loading in Plane-Strain Condition. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2015, 141, .	3.0	115

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91	Observed and predicted behaviour of rail ballast under monotonic loading capturing particle breakage. Canadian Geotechnical Journal, 2015, 52, 73-86.	2.8	80
92	Performance monitoring " case studies of tracks stabilised by geosynthetic grids and prefabricated vertical drains. , 2015, , .		2
93	From theory to practice in track geomechanics " Australian perspective for synthetic inclusions. Transportation Geotechnics, 2014, 1, 171-187.	4.5	49
94	Effect of cyclic loading frequency on the permanent deformation and degradation of railway ballast. Geotechnique, 2014, 64, 746-751.	4.0	120
95	Performance assessment of reinforced ballasted rail track. Proceedings of the Institution of Civil Engineers: Ground Improvement, 2014, 167, 24-34.	1.0	53
96	Three-dimensional characterisation of particle size and shape for ballast. Geotechnique Letters, 2014, 4, 197-202.	1.2	68
97	Experimental and numerical investigation of high-yield grout ore pass plugs to resist impact loads. International Journal of Rock Mechanics and Minings Sciences, 2014, 70, 1-15.	5.8	7
98	Ground Improvement for Rail, Port and Road Infrastructure--From Theory to Practice. , 2014, , .		0
99	A constitutive model for coal-fouled ballast capturing the effects of particle degradation. Computers and Geotechnics, 2014, 61, 96-107.	4.7	57
100	Ground improvement in transport geotechnics " from theory to practice. , 2014, , 35-44.		0
101	Behaviour of clay-fouled ballast under drained triaxial testing. Geotechnique, 2013, 63, 410-419.	4.0	106
102	Stress-Strain Degradation Response of Railway Ballast Stabilized with Geosynthetics. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2013, 139, 684-700.	3.0	139
103	Performance Monitoring of Rail Tracks Stabilized by Geosynthetics and Shock Mats: Case Studies at Bulli and Singleton in Australia. , 2013, , .		5
104	Closure to "Stress-Strain Degradation Response of Railway Ballast Stabilized with Geosynthetics" by Buddhima Indraratna and Sanjay Nimbalkar. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2013, 139, 2233-2233.	3.0	1
105	Modernisation of Rail Tracks for Higher Speeds and Greater Freight. International Journal of Railway Technology, 2013, 2, 1-20.	0.3	15
106	Effects Of Fouling On The Stress"Strain"Degradation Behaviour Of Rail Ballast. , 2013, , .		0
107	Improved Performance of Railway Ballast under Impact Loads Using Shock Mats. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2012, 138, 281-294.	3.0	144
108	Performance Improvement of Railway Ballast Using Shock Mats and Synthetic Grids. , 2012, , .		3

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109	Performance evaluation of shock mats and synthetic grids in the improvement of rail ballast. , 2012, , 47-62.		4
110	The Role of Ballast-Fouling Characteristics on the Drainage Capacity of Rail Substructure. Geotechnical Testing Journal, 2012, 35, 629-640.	1.0	97
111	Track Stabilisation with Geosynthetics and Geodrains, and Performance Verification through Field Monitoring and Numerical Modelling. International Journal of Railway Technology, 2012, 1, 195-219.	0.3	15
112	Deformation and Degradation of Clay fouled Ballast Subjected to Monotonic Loading. , 2012, , .		2
113	Effects of Geosynthetic Reinforcement on Performance of Ballasted Rail Track. , 2012, , .		1
114	Use of Geosynthetics in Railways Including Geocomposites and Vertical Drains. , 2011, , .		5
115	PHYSICAL AND CHEMICAL GROUND IMPROVEMENT FOR SUSTAINABLE TRANSPORTATION INFRASTRUCTURE UNDER CYCLIC LOADS. , 2011, , .		0
116	Effect of Amplification on Seismic Stability of Tailings Dam. , 2010, , .		6
117	The Behaviour of Ballasted Track Foundations: Track Drainage and Geosynthetic Reinforcement. , 2010, , .		46
118	Field Assessment of the Performance of a Ballasted Rail Track with and without Geosynthetics. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 2010, 136, 907-917.	3.0	200
119	Seismic Rotational Displacement of Gravity Walls by Pseudodynamic Method. International Journal of Geomechanics, 2008, 8, 169-175.	2.7	64
120	Seismic design of retaining wall by considering wall-soil inertia for active case. International Journal of Geotechnical Engineering, 2008, 2, 319-328.	2.0	10
121	EFFECTS OF BODY WAVES AND SOIL AMPLIFICATION ON SEISMIC EARTH PRESSURES. Journal of Earthquake and Tsunami, 2008, 02, 33-52.	1.3	32
122	External stability of reinforced soil walls under seismic conditions. Geosynthetics International, 2007, 14, 211-218.	2.9	40
123	Sliding stability and seismic design of retaining wall by pseudo-dynamic method for passive case. Soil Dynamics and Earthquake Engineering, 2007, 27, 497-505.	3.8	68
124	Seismic rotational displacement of gravity walls by pseudo-dynamic method: Passive case. Soil Dynamics and Earthquake Engineering, 2007, 27, 242-249.	3.8	84
125	Discussion and Response: Seismic stability of reinforced-soil wall by pseudo-dynamic method. Geosynthetics International, 2006, 13, 277-278.	2.9	5
126	Pseudo-dynamic approach of seismic active earth pressure behind retaining wall. Geotechnical and Geological Engineering, 2006, 24, 1103-1113.	1.7	177

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127	Seismic stability of reinforced-soil wall by pseudo-dynamic method. Geosynthetics International, 2006, 13, 111-119.	2.9	102
128	Seismic passive resistance by pseudo-dynamic method. Geotechnique, 2005, 55, 699-702.	4.0	194
129	Impact of Ballast Fouling on Rail Tracks. , 0, , .		1
130	Finite Element Analysis of Electro-Thermal Coupling of Sandstone Under Lightning Currents. Geotechnical and Geological Engineering, 0, , 1.	1.7	1